

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAEAL1624

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

|              |    |                 |  |
|--------------|----|-----------------|--|
| NEWS         | 1  |                 | Web Page for STN Seminar Schedule - N. America   |
| NEWS         | 2  | JUL 02          | LMEDLINE coverage updated  |
| NEWS         | 3  | JUL 02          | SCISEARCH enhanced with complete author names  |
| NEWS         | 4  | JUL 02          | CHEMCATS accession numbers revised   |
| NEWS         | 5  | JUL 02          | CA/CAPplus enhanced with utility model patents from China  |
| NEWS         | 6  | JUL 16          | CAplus enhanced with French and German abstracts   |
| NEWS         | 7  | JUL 18          | CA/CAPplus patent coverage enhanced  |
| NEWS         | 8  | JUL 26          | USPATFULL/USPAT2 enhanced with IPC reclassification  |
| NEWS         | 9  | JUL 30          | USGENE now available on STN  |
| NEWS         | 10 | AUG 06          | CAS REGISTRY enhanced with new experimental property tags  |
| NEWS         | 11 | AUG 06          | FSTA enhanced with new thesaurus edition   |
| NEWS         | 12 | AUG 13          | CA/CAPplus enhanced with additional kind codes for granted patents   |
| NEWS         | 13 | AUG 20          | CA/CAPplus enhanced with CAS indexing in pre-1907 records  |
| NEWS         | 14 | AUG 27          | Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB   |
| NEWS         | 15 | AUG 27          | USPATOLD now available on STN  |
| NEWS         | 16 | AUG 28          | CAS REGISTRY enhanced with additional experimental spectral property data  |
| NEWS         | 17 | SEP 07          | STN AnaVist, Version 2.0, now available with Derwent World Patents Index   |
| NEWS         | 18 | SEP 13          | FORIS renamed to SOFIS   |
| NEWS         | 19 | SEP 13          | INPADOCDB enhanced with monthly SDI frequency  |
| NEWS         | 20 | SEP 17          | CA/CAPplus enhanced with printed CA page images from 1967-1998   |
| NEWS         | 21 | SEP 17          | CAplus coverage extended to include traditional medicine patents   |
| NEWS         | 22 | SEP 24          | EMBASE, EMBAL, and LEMBASE reloaded with enhancements  |
| NEWS         | 23 | OCT 02          | CA/CAPplus enhanced with pre-1907 records from Chemisches Zentralblatt   |
| NEWS         | 24 | OCT 19          | BEILSTEIN updated with new compounds   |
| NEWS EXPRESS | 19 | SEPTEMBER 2007: | CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007. |
| NEWS HOURS   |    |                 | STN Operating Hours Plus Help Desk Availability  |
| NEWS LOGIN   |    |                 | Welcome Banner and News Items  |
| NEWS IPC8    |    |                 | For general information regarding STN implementation of IPC 8  |

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 18:19:24 ON 13 NOV 2007

=> FILE CAPLUS

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST  | 0.21             | 0.21          |

FILE 'CAPLUS' ENTERED AT 18:19:47 ON 13 NOV 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 13 Nov 2007 VOL 147 ISS 21

FILE LAST UPDATED: 12 Nov 2007 (20071112/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> S ADHESION ASSAY AND (AUTOIMMUNE OR INFLAMMATORY) DISEASE  
MISSING OPERATOR AMMATORY) DISEASE

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> S ADHESION ASSAY AND AUTOIMMUNE DISEASE

- 308719 ADHESION
- 4485 ADHESIONS
- 310002 ADHESION
- (ADHESION OR ADHESIONS)
- 388504 ASSAY
- 171917 ASSAYS
- 512601 ASSAY
- (ASSAY OR ASSAYS)
- 1511 ADHESION ASSAY
- (ADHESION(W)ASSAY)
- 55187 AUTOIMMUNE
- 1005996 DISEASE
- 273226 DISEASES
- 1127874 DISEASE
- (DISEASE OR DISEASES)

## 37990 AUTOIMMUNE DISEASE

(AUTOIMMUNE(W)DISEASE)

L1 18 ADHESION ASSAY AND AUTOIMMUNE DISEASE

=&gt; L1 AND INFLAMMATORY DISEASE

L1 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=&gt; S L1 AND INFLAMMATORY DISEASE

191019 INFLAMMATORY

347 INFLAMMATORIES

191126 INFLAMMATORY

(INFLAMMATORY OR INFLAMMATORIES)

1005996 DISEASE

273226 DISEASES

1127874 DISEASE

(DISEASE OR DISEASES)

13406 INFLAMMATORY DISEASE

(INFLAMMATORY(W)DISEASE)

L2 3 L1 AND INFLAMMATORY DISEASE

=&gt; D IBIB ABS TOT

L2 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:410661 CAPLUS Full-text

DOCUMENT NUMBER: 146:402310

TITLE: Preparation of carbamates, particularly  
N-(pyrimidin-4-yl)-L-(aminocarbonyloxy)phenylalanine  
derivatives, which inhibit leukocyte adhesion mediated  
by VLA-4

INVENTOR(S): Semko, Christopher Michael; Xu, Ying-Zi; Stappenbeck,  
Frank; Smith, Jenifer Lea; Rossiter, Kassandra Inez;  
Fukuda, Juri Y.; Konradi, Andrei W.

PATENT ASSIGNEE(S): Elan Pharmaceuticals, Inc., USA; Wyeth, John, and  
Brother Ltd.

SOURCE: PCT Int. Appl., 190pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|---------------|--|----------|-----------------|----------|
| -----         | ----   | -----    | -----           | -----    |
| WO 2007041324 | A1   | 20070412 | WO 2006-US38113 | 20060928 |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW |          |                 |          |
| RW:           | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM   |          |                 |          |
| US 2007129390 | A1   | 20070607 | US 2006-541205  | 20060928 |

PRIORITY APPLN. INFO.:

US 2005-722355P

P 20050929

OTHER SOURCE(S):

MARPAT 146:402310

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Disclosed are phenylalanines I [Ar = (un)substituted (hetero)aryl; Z = (CH<sub>2</sub>)<sub>n</sub>; n = 1-4; X = S, O; T = a bond, S, SO, SO<sub>2</sub>, NH and derivs.; R<sub>1</sub> = (un)substituted alk(en/yn)yl, aryl, heterocyclyl, etc.; R<sub>2</sub> = H, acyl, alkyl, alkoxy, etc.; or R<sub>1</sub>TCNR<sub>2</sub> = (un)substituted heterocyclyl containing 4-8 ring atoms; R<sub>3</sub>, R<sub>4</sub> = independently H, alkyl, OH and derivs., heteroaryl, etc.; or R<sub>3</sub>NR<sub>4</sub> = (un)substituted heterocyclyl; provided that when one of R<sub>3</sub> and R<sub>4</sub> = OH, (un)substituted alkoxy, the other of R<sub>3</sub> and R<sub>4</sub> = H, (un)substituted cyclo/alkyl, (hetero)aryl, heterocyclyl; R<sub>5</sub> = H, (un)substituted alkyl; R<sub>6</sub> = carboxy, carboxy ester; R<sub>7</sub>, R<sub>8</sub> = H, (un)substituted alkyl; R<sub>7</sub>NR<sub>8</sub> = (un)substituted heterocyclyl; Y = N, CH; with the exception of specified compds.], their pharmaceutically acceptable salts, esters, and prodrugs, which bind to VLA-4. Certain carbamates I also inhibit leukocyte adhesion and, in particular, leukocyte adhesion mediated by VLA-4. Thus, II was prepared by a 6-step synthesis starting from nitropyrimidine-carbamate III.  $\alpha$ 4 $\beta$ 1 Integrin adhesion assays were performed. I are useful for treating inflammatory diseases in a mammalian patient, e.g., human, such as asthma, Alzheimer's disease, atherosclerosis, AIDS dementia, diabetes, inflammatory bowel disease, rheumatoid arthritis, tissue transplantation, tumor metastasis and myocardial ischemia. I are also useful for treating inflammatory brain diseases such as multiple sclerosis.

REFERENCE COUNT:

4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:410526 CAPLUS Full-text

DOCUMENT NUMBER: 146:402309

TITLE: Preparation of N-(4-pyrimidinyl)amides, particularly N-(carbamoylpyrimidin-4-yl)-L-[[aminocarbonyloxy]phenylalanines, which inhibit leukocyte adhesion mediated by VLA-4

INVENTOR(S): Semko, Christopher Michael; Xu, Ying-Zi; Stappenbeck, Frank; Smith, Jenifer Lea; Rossiter, Kassandra Inez; Fukuda, Juri Y.; Konradi, Andrei W.

PATENT ASSIGNEE(S): Elan Pharmaceuticals, Inc., USA; Wyeth, John, and Brother Ltd.

SOURCE: PCT Int. Appl., 88pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND  | DATE     | APPLICATION NO. | DATE     |
|---------------|---|----------|-----------------|----------|
| -----         | ----  | -----    | -----           | -----    |
| WO 2007041270 | A1  | 20070412 | WO 2006-US38009 | 20060928 |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, |          |                 |          |

UA, UG, US, UZ, VC, VN, ZA, ZM, ZW  
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,  
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM

US 2007142416 A1 20070621 US 2006-529815 20060928  
PRIORITY APPLN. INFO.: US 2005-722358P P 20050929  
OTHER SOURCE(S): MARPAT 146:402309  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Disclosed are phenylalanines I [R1 = halo/alkyl, heteroaryl, NR5R6; R5, R6 = independently H, alkyl; or NR5R6 = heterocyclyl; R2 = alk(en/yn)yl; R3, R4 = alkyl; NR3R4 = heterocyclyl], their pharmaceutically acceptable salts, esters, and prodrugs, which bind to VLA-4. Certain phenylalanines I also inhibit leukocyte adhesion and, in particular, leukocyte adhesion mediated by VLA-4. Thus, II was prepared in 8 steps using nitropyrimidine-carbamate III, Et iodide and 3-furoyl chloride.  $\alpha\beta 1$  Integrin adhesion assays were performed. I are useful for treating inflammatory diseases in a mammalian patient, e.g., human, such as asthma, Alzheimer's disease, atherosclerosis, AIDS dementia, diabetes, inflammatory bowel disease, rheumatoid arthritis, tissue transplantation, tumor metastasis and myocardial ischemia. I are also useful for treating inflammatory brain diseases such as multiple sclerosis.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:543489 CAPLUS Full-text

DOCUMENT NUMBER: 117:143489

TITLE: preparation of substituted urea and related compounds as cell adhesion modulators

INVENTOR(S): McKenzie, Thomas C.; Rishton, Gilbert M.

PATENT ASSIGNEE(S): Tanabe Seiyaku Co., Ltd., Japan

SOURCE: PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
| WO 9208464 | A1   | 19920529 | WO 1991-US8528  | 19911114 |

W: CA, JP, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE

PRIORITY APPLN. INFO.: US 1990-613412 A2 19901115

OTHER SOURCE(S): MARPAT 117:143489

AB Substituted urea, thiourea, and guanidino compds., and salts thereof, are useful as cell receptor antagonists for modulating cell adhesion via integrin and/or fibronectin receptors. These compds. are used for diagnosis, treatment, or prevention of cardiovascular and autoimmune diseases or conditions involving cell adhesion. Thus, 3,4-dichlorophenylguanidine was reacted with 3,5-dimethylpyrazolecarboxamide nitrate to obtain 1-(3,4-dichlorophenyl)biguanide nitrate (I). The IC<sub>50</sub> of I was 65 $\mu$ M in a U937 cell fibronectin adhesion assay.

```
=> S NEUTROPHIL ASSAY
    49049 NEUTROPHIL
    36408 NEUTROPHILS
    57908 NEUTROPHIL
        (NEUTROPHIL OR NEUTROPHILS)
    388504 ASSAY
    171917 ASSAYS
    512601 ASSAY
        (ASSAY OR ASSAYS)
L3      44 NEUTROPHIL ASSAY
        (NEUTROPHIL(W)ASSAY)
```

```
=> S L3 AND AUTOIMMUNE DISEASE
    55187 AUTOIMMUNE
    1005996 DISEASE
    273226 DISEASES
    1127874 DISEASE
        (DISEASE OR DISEASES)
    37990 AUTOIMMUNE DISEASE
        (AUTOIMMUNE(W)DISEASE)
L4      0 L3 AND AUTOIMMUNE DISEASE
```

```
=> S L3 AND INFLAMMATORY DISEASE
    191019 INFLAMMATORY
    347 INFLAMMATORIES
    191126 INFLAMMATORY
        (INFLAMMATORY OR INFLAMMATORIES)
    1005996 DISEASE
    273226 DISEASES
    1127874 DISEASE
        (DISEASE OR DISEASES)
    13406 INFLAMMATORY DISEASE
        (INFLAMMATORY(W)DISEASE)
L5      0 L3 AND INFLAMMATORY DISEASE
```

```
=> D L1 IBIB ABS TOT
```

```
L1  ANSWER 1 OF 18  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:      2007:1036145  CAPLUS  Full-text
```

```
TITLE:                Sequence recognition of  $\alpha$ -LFA-1-derived peptides
                        by ICAM-1 cell receptors: inhibitors of T-cell
                        adhesion
```

```
AUTHOR(S):            Yusuf-Makagiansar, Helena; Yakovleva, Tatyana V.;
                        Tejo, Bimo A.; Jones, Karen; Hu, Yongbo; Verkhivker,
                        Gennady M.; Audus, Kenneth L.; Siahaan, Teruna J.
```

```
CORPORATE SOURCE:     Department of Pharmaceutical Chemistry, The University
                        of Kansas, Lawrence, KS, 66047, USA
```

```
SOURCE:              Chemical Biology & Drug Design (2007), 70(3), 237-246
                        CODEN: CBDDAL; ISSN: 1747-0277
```

```
PUBLISHER:            Blackwell Publishing Ltd.
```

```
DOCUMENT TYPE:        Journal
```

```
LANGUAGE:             English
```

```
AB  Blocking the T-cell adhesion signal from intercellular adhesion mol.-
    1/leukocyte function-associated antigen-1 interactions (Signal-2) can suppress
    the progression of autoimmune diseases (i.e. type-1 diabetes, psoriasis) and
    prevent allograft rejection. In this study, we determined the active
```

region(s) of cLAB.L peptide [cyclo(1,12)-Pen-ITDGEATDSGC] by synthesizing and evaluating the biol. activity of hexapeptides in inhibiting T-cell adhesion. A new heterotypic T-cell adhesion assay was also developed to provide a model for the T-cell adhesion process during lung inflammation. Two hexapeptides, ITDGEA and DGEATD, were found to be more active than the other linear hexapeptides. The cyclic derivative of ITDGEA [i.e. cyclo(1,6) ITDGEA] has similar activity than the parent linear peptide and has lower activity than cLAB.L peptide. Computational-binding expts. were carried out to explain the possible mechanism of binding of these peptides to intercellular adhesion mol.-1. Both ITDGEA and DGEATD bind the same site on intercellular adhesion mol.-1 and they interact with the Gln34 and Gln73 residues on D1 of intercellular adhesion mol.-1. In the future, more potent derivs. of cyclo(1,6)ITDGEA will be designed by utilizing structural and binding studies of the peptide to intercellular adhesion mol.-1. The heterotypic T-cell adhesion to Calu-3 will also be used as another assay to evaluate the selectivity of the designed peptides.

L1 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:923080 CAPLUS Full-text

DOCUMENT NUMBER: 147:446735

TITLE: Structure-function studies of peptides for cell adhesion inhibition: Identification of key residues by alanine mutation and peptide-truncation approach

AUTHOR(S): Li, Cheng; Satyanarayanajois, Seetharama D.

CORPORATE SOURCE: Department of Pharmacy, National University of Singapore, Singapore, 117543, Singapore

SOURCE: Peptides (New York, NY, United States) (2007), 28(8), 1498-1508

CODEN: PPTDD5; ISSN: 0196-9781

PUBLISHER: Elsevier Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Blockage of the interaction of CD2 with its ligand CD58 is expected to bring out potential therapeutic value for autoimmune diseases and organ transplantation. Three series of peptides (cVL, cIL and cAQ series) were designed from ratCD2 and humanCD2 to modulate CD2-CD58 interaction. To determine the specific segments in parent peptides responsible for inhibitory activity as lead sequence, the authors generated shorter fragments of the parent peptides and evaluated their biol. activity with cell adhesion assay. The structure-activity relation studies indicated that small cyclic peptides derived from CD2 ligand binding epitopes could mimic native  $\beta$ -turn structure, and thus modulate CD2-CD58 interaction.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:591945 CAPLUS Full-text

DOCUMENT NUMBER: 147:31369

TITLE: Preparation of L-phenylalanine derivatives as  $\alpha 5\beta 1$  integrin inhibitors for treating especially solid tumors

INVENTOR(S): Kettle, Jason Grant; Barry, Simon Thomas; Rudge, David Alan

PATENT ASSIGNEE(S): Astrazeneca AB, Swed.; Astrazeneca UK Limited

SOURCE: PCT Int. Appl., 210pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE       |
|---|------|----------|------------------|------------|
| WO 2007060408   | A2   | 20070531 | WO 2006-GB4337   | 20061122   |
| WO 2007060408   | A3   | 20070802 |                  |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW |      |          |                  |            |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA  |      |          |                  |            |
| PRIORITY APPLN. INFO.:  |      |          | US 2005-739456P  | P 20051123 |
| OTHER SOURCE(S):  |      |          | MARPAT 147:31369 |            |
| GI  |      |          |                  |            |

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention is related to the preparation of L-phenylalanine derivs. I [X = O, NH and derivs., S, SO, SO<sub>2</sub>; Z = (CH<sub>2</sub>)<sub>n</sub>; T = (CH<sub>2</sub>)<sub>m</sub>; m, n = independently 0-2; R<sub>2a</sub>, R<sub>2b</sub>, R<sub>2c</sub> = independently H, halo, OH, alkyl, alkoxy, or if 2 of R<sub>2a</sub>, R<sub>2b</sub>, R<sub>2c</sub> are attached to the same C, they may form an oxo group; R<sub>3a</sub>, R<sub>3b</sub>, R<sub>3c</sub>, R<sub>3d</sub> = independently H, halo, alkyl, alkoxy; R<sub>4</sub> = H, ar/heteroar/alkyl, (hetero)aryl; R<sub>5</sub> = aryl which is ortho-substituted with at least one group selected from alkyl, alkoxy or halo and which is further optionally substituted with 1 or 2 groups], their pharmaceutical acceptable salts, prodrugs and hydrates, as  $\alpha 5\beta 1$  integrin inhibitors, their pharmaceutical compns. and their use alone or in combination with another agent for treatment of diseases that have a significant angiogenesis or vascular component such as solid tumors. The invention also relates to compds. that inhibit  $\alpha 5\beta 1$  integrin and that exhibit appropriate selectivity profile(s) against other integrins. Thus, a multi-step synthesis starting from N-(tert-butoxycarbonyl)tyrosine Me ester was given for L-phenylalanine derivative II. I inhibited the  $\alpha 5\beta 1$  integrin in an in vitro binding assay (IC<sub>50</sub> values in the range of 0.01 to 300  $\mu$ M) and in an in vitro cell adhesion assay (IC<sub>50</sub> values in the range of 0.01 to 50  $\mu$ M).

L1 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2007:591554 CAPLUS Full-text  
DOCUMENT NUMBER: 147:31368  
TITLE: Preparation of L-alanine derivatives as  
 $\alpha 5\beta 1$  integrin inhibitors for treating  
especially solid tumors  
INVENTOR(S): Kettle, Jason Grant  
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.; Astrazeneca UK Limited  
SOURCE: PCT Int. Appl., 120pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English



FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE       |
|---|------|----------|------------------|------------|
| WO 2007060409   | A1   | 20070531 | WO 2006-GB4338   | 20061122   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW |      |          |                  |            |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  |      |          |                  |            |
| PRIORITY APPLN. INFO.:  |      |          | US 2005-739486P  | P 20051123 |
| OTHER SOURCE(S):  |      |          | MARPAT 147:31368 |            |
| GI  |      |          |                  |            |

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention is related to the preparation of L-alanine derivs. I [X = O, NH and derivs., S, SO, SO<sub>2</sub>; T = (CH<sub>2</sub>)<sub>m</sub>; Z = (CH<sub>2</sub>)<sub>n</sub>; m, n = independently 0-2; Y = C or N, provided that when the dashed line is a bond, Y = C; R<sub>2a</sub>, R<sub>2b</sub>, R<sub>2c</sub> = independently H, halo, OH, alkyl, alkoxy, or if 2 of R<sub>2a</sub>, R<sub>2b</sub>, R<sub>2c</sub> are attached to the same C, they may form an oxo group; at least one of A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub> and A<sub>4</sub> = N and the others = C; R<sub>3a</sub>, R<sub>3b</sub>, R<sub>3c</sub>, R<sub>3d</sub> = independently H, halo, alkyl, alkoxy, or absent when any of A<sub>1</sub>-A<sub>4</sub> = N; R<sub>4</sub> = H, ar/heteroar/alkyl, (hetero)aryl; R<sub>5</sub> = aryl which is ortho-substituted with at least one group selected from alkyl or halo and which is further optionally substituted with 1 or 2 groups], their pharmaceutical acceptable salts, prodrugs and hydrates, as  $\alpha$ 5 $\beta$ 1 integrin inhibitors, their pharmaceutical compns. and their use alone or in combination with another agent for treatment of diseases that have a significant angiogenesis or vascular component such as solid tumors (no data). The invention is also related to compds. that inhibit  $\alpha$ 5 $\beta$ 1 integrin and that exhibit appropriate selectivity profile(s) against other integrins. Thus, a multi-step synthesis starting from Me N-(tert-butoxycarbonyl)-3-iodo-L-alaninate and 2,5-dibromopyridine was given for L-alanine derivative II. II inhibited the  $\alpha$ 5 $\beta$ 1 integrin in an in vitro binding assay (IC<sub>50</sub> = 6.0  $\mu$ M) and in an in vitro cell adhesion assay (IC<sub>50</sub> = 13.2  $\mu$ M).

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:410661 CAPLUS Full-text

DOCUMENT NUMBER: 146:402310

TITLE: Preparation of carbamates, particularly N-(pyrimidin-4-yl)-L-(aminocarbonyloxy)phenylalanine derivatives, which inhibit leukocyte adhesion mediated by VLA-4

INVENTOR(S): Semko, Christopher Michael; Xu, Ying-Zi; Stappenbeck, Frank; Smith, Jenifer Lea; Rossiter, Kassandra Inez; Fukuda, Juri Y.; Konradi, Andrei W.

PATENT ASSIGNEE(S): Elan Pharmaceuticals, Inc., USA; Wyeth, John, and Brother Ltd.  
 SOURCE: PCT Int. Appl., 190pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND              | DATE     | APPLICATION NO. | DATE       |
|---|-------------------|----------|-----------------|------------|
| WO 2007041324   | A1                | 20070412 | WO 2006-US38113 | 20060928   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW<br>RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |                   |          |                 |            |
| US 2007129390   | A1                | 20070607 | US 2006-541205  | 20060928   |
| PRIORITY APPLN. INFO.:  |                   |          | US 2005-722355P | P 20050929 |
| OTHER SOURCE(S):  | MARPAT 146:402310 |          |                 |            |
| GI  |                   |          |                 |            |

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Disclosed are phenylalanines I [Ar = (un)substituted (hetero)aryl; Z = (CH<sub>2</sub>)<sub>n</sub>; n = 1-4; X = S, O; T = a bond, S, SO, SO<sub>2</sub>, NH and derivs.; R<sub>1</sub> = (un)substituted alk(en/yn)yl, aryl, heterocyclyl, etc.; R<sub>2</sub> = H, acyl, alkyl, alkoxy, etc.; or R<sub>1</sub>TCNR<sub>2</sub> = (un)substituted heterocyclyl containing 4-8 ring atoms; R<sub>3</sub>, R<sub>4</sub> = independently H, alkyl, OH and derivs., heteroaryl, etc.; or R<sub>3</sub>NR<sub>4</sub> = (un)substituted heterocyclyl; provided that when one of R<sub>3</sub> and R<sub>4</sub> = OH, (un)substituted alkoxy, the other of R<sub>3</sub> and R<sub>4</sub> = H, (un)substituted cyclo/alkyl, (hetero)aryl, heterocyclyl; R<sub>5</sub> = H, (un)substituted alkyl; R<sub>6</sub> = carboxy, carboxy ester; R<sub>7</sub>, R<sub>8</sub> = H, (un)substituted alkyl; R<sub>7</sub>NR<sub>8</sub> = (un)substituted heterocyclyl; Y = N, CH; with the exception of specified compds.], their pharmaceutically acceptable salts, esters, and prodrugs, which bind to VLA-4. Certain carbamates I also inhibit leukocyte adhesion and, in particular, leukocyte adhesion mediated by VLA-4. Thus, II was prepared by a 6-step synthesis starting from nitropyrimidine-carbamate III.  $\alpha$ 4 $\beta$ 1 Integrin adhesion assays were performed. I are useful for treating inflammatory diseases in a mammalian patient, e.g., human, such as asthma, Alzheimer's disease, atherosclerosis, AIDS dementia, diabetes, inflammatory bowel disease, rheumatoid arthritis, tissue transplantation, tumor metastasis and myocardial ischemia. I are also useful for treating inflammatory brain diseases such as multiple sclerosis.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2007:410526 CAPLUS Full-text  
 DOCUMENT NUMBER: 146:402309

TITLE: Preparation of N-(4-pyrimidinyl)amides, particularly N-(carbamoylpyrimidin-4-yl)-L-[[aminocarbonyloxy)phenylalanines, which inhibit leukocyte adhesion mediated by VLA-4

INVENTOR(S): Semko, Christopher Michael; Xu, Ying-Zi; Stappenbeck, Frank; Smith, Jenifer Lea; Rossiter, Kassandra Inez; Fukuda, Juri Y.; Konradi, Andrei W.

PATENT ASSIGNEE(S): Elan Pharmaceuticals, Inc., USA; Wyeth, John, and Brother Ltd.

SOURCE: PCT Int. Appl., 88pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE     | APPLICATION NO. | DATE       |
|------------------------|--|----------|-----------------|------------|
| WO 2007041270          | A1   | 20070412 | WO 2006-US38009 | 20060928   |
| W:                     | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW |          |                 |            |
| RW:                    | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM   |          |                 |            |
| US 2007142416          | A1   | 20070621 | US 2006-529815  | 20060928   |
| PRIORITY APPLN. INFO.: |  |          | US 2005-722358P | P 20050929 |
| OTHER SOURCE(S):       | MARPAT 146:402309  |          |                 |            |

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Disclosed are phenylalanines I [R1 = halo/alkyl, heteroaryl, NR5R6; R5, R6 = independently H, alkyl; or NR5R6 = heterocyclyl; R2 = alk(en/yn)yl; R3, R4 = alkyl; NR3R4 = heterocyclyl], their pharmaceutically acceptable salts, esters, and prodrugs, which bind to VLA-4. Certain phenylalanines I also inhibit leukocyte adhesion and, in particular, leukocyte adhesion mediated by VLA-4. Thus, II was prepared in 8 steps using nitropyrimidine-carbamate III, Et iodide and 3-furoyl chloride.  $\alpha 4 \beta 1$  Integrin adhesion assays were performed. I are useful for treating inflammatory diseases in a mammalian patient, e.g., human, such as asthma, Alzheimer's disease, atherosclerosis, AIDS dementia, diabetes, inflammatory bowel disease, rheumatoid arthritis, tissue transplantation, tumor metastasis and myocardial ischemia. I are also useful for treating inflammatory brain diseases such as multiple sclerosis.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:287513 CAPLUS Full-text

DOCUMENT NUMBER: 146:434677

TITLE: Therapeutic effect of all-trans-retinoic acid (at-RA)

on an autoimmune nephritis experimental model: role of the VLA-4 integrin

AUTHOR(S): Escribese, Maria M.; Conde, Elisa; Martin, Ana; Saenz-Morales, David; Sancho, David; Perez de Lema, Guillermo; Lucio-Cazana, Javier; Sanchez-Madrid, Francisco; Garcia-Bermejo, Maria L.; Mampaso, Francisco M.

CORPORATE SOURCE: Department of Pathology, Hospital Ramon y Cajal, Universidad de Alcala, Madrid, Spain

SOURCE: BMC Nephrology (2007), 8, No pp. given  
CODEN: BNMEB7; ISSN: 1471-2369  
URL: <http://www.biomedcentral.com/content/pdf/1471-2369-8-3.pdf>

PUBLISHER: BioMed Central Ltd.

DOCUMENT TYPE: Journal; (online computer file)

LANGUAGE: English

AB Mercuric chloride (HgCl<sub>2</sub>) induces an autoimmune nephritis in the Brown Norway (BN) rats characterized by anti-glomerular basement membrane antibodies (anti-GBM Ab) deposition, proteinuria and a severe interstitial nephritis, all evident at day 13 of the disease. We assessed the effects of all-trans retinoic acid (at-RA) in this exptl. model. At-RA is a vitamin A metabolite which has shown beneficial effects on several nephropathies, even though no clear targets for at-RA were provided. We separated animals in four different exptl. groups (HgCl<sub>2</sub>, HgCl<sub>2</sub>+at-RA, at-RA and vehicle). From each animal we collected, at days 0 and 13, numerous biol. samples: urine, to measure proteinuria by colorimetry; blood to determine VLA-4 expression by flow cytometry; renal tissue to study the expression of VCAM-1 by Western blot, the presence of cellular infiltrates by immunohistochem., the IgG deposition by immunofluorescence, and the cytokines expression by RT-PCR. Addnl., adhesion assays to VCAM-1 were performed using K562  $\alpha 4$  transfectant cells. ANOVA tests were used for statistical significance estimation. We found that at-RA significantly decreased the serum levels of anti-GBM and consequently its deposition along the glomerular membrane. At-RA markedly reduced proteinuria as well as the number of cellular infiltrates in the renal interstitium, the levels of TNF- $\alpha$  and IL-1 $\beta$  cytokines and VCAM-1 expression in renal tissue. Moreover, we reported here for the first time in an in vivo model that at-RA reduced, to basal levels, the expression of VLA-4 ( $\alpha 4\beta 1$ ) integrin induced by mercury on peripheral blood leukocytes (PBLs). In addition, using K562  $\alpha 4$  stable transfectant cells, we found that at-RA inhibited VLA-4 dependent cell adhesion to VCAM-1. Here we demonstrate a therapeutic effect of at-RA on an autoimmune exptl. nephritis model in rats. We report a significant reduction of the VLA-4 integrin expression on PBLs as well as the inhibition of the VLA4/VCAM1-dependent leukocyte adhesion by at-RA treatment. Thereby we point out the VLA-4 integrin as a target for at-RA in vivo.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1292873 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 146:206619

TITLE: Structure-activity relationship studies of a series of peptidomimetic ligands for  $\alpha 4\beta 1$  integrin on Jurkat T-leukemia cells

AUTHOR(S): Liu, Ruiwu; Peng, Li; Han, Huijun; Lam, Kit S.

CORPORATE SOURCE: Division of Hematology and Oncology, Department of Internal Medicine, UC Davis Cancer Center, University of California Davis, Sacramento, CA, 95817, USA

SOURCE: Biopolymers (2006), 84(6), 595-604  
CODEN: BIPMAA; ISSN: 0006-3525

PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 146:206619  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB  $\alpha 4\beta 1$  Integrin is a therapeutic target for inflammation, autoimmune diseases, and lymphoid cancers. A series of peptidomimetic ligands based on the Nle-D-I motif have been synthesized and their binding affinities (IC<sub>50</sub>) to activated  $\alpha 4\beta 1$  integrin on Jurkat T-leukemia cells were determined using a cell adhesion assay. One of the 51 ligands, peptide I, has an IC<sub>50</sub> = 0.6 nM, more than two fold increase of binding affinity than the initial lead compound II. Extensive SAR studies provided important information for further ligand optimization, which has served as a foundation for studies that ultimately led to identification of a potent ligand with an IC<sub>50</sub> = 2 pM.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1107613 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 143:326627

TITLE: Preparation of N-(2-phenylethyl)sulfamide derivatives as  $\alpha 4$  integrin antagonists for treatment of inflammatory and immune disorders

INVENTOR(S): Jimenez Mayorga, Juan Miguel; Vidal Gispert, Laura; Warrelow, Graham

PATENT ASSIGNEE(S): Almirall Prodesfarma, S.A., Spain

SOURCE: Span., 41 pp.

CODEN: SPXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Spanish

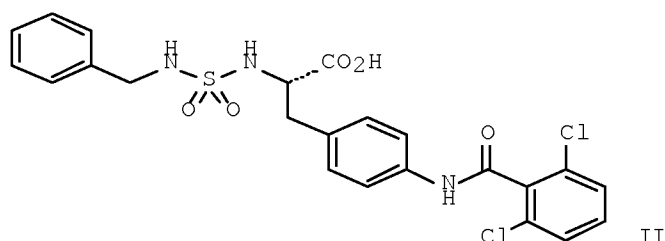
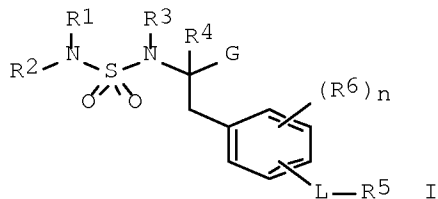
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|---------------|--|----------|-----------------|----------|
| ES 2219177    | A1   | 20041116 | ES 2003-1004    | 20030505 |
| ES 2219177    | B1   | 20060216 |                 |          |
| WO 2004099126 | A1   | 20041118 | WO 2004-EP4670  | 20040503 |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |          |                 |          |
| RW:           | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |
| EP 1622867    | A1   | 20060208 | EP 2004-730833  | 20040503 |
| EP 1622867    | B1   | 20070919 |                 |          |
| R:            | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR   |          |                 |          |

|                        |    |          |                  |            |
|------------------------|----|----------|------------------|------------|
| CN 1816523             | A  | 20060809 | CN 2004-80019205 | 20040503   |
| JP 2006525271          | T  | 20061109 | JP 2006-505356   | 20040503   |
| AT 373637              | T  | 20071015 | AT 2004-730833   | 20040503   |
| US 2007179183          | A1 | 20070802 | US 2006-555286   | 20061017   |
| PRIORITY APPLN. INFO.: |    |          | ES 2003-1004     | A 20030505 |
|                        |    |          | WO 2004-EP4670   | W 20040503 |

OTHER SOURCE(S):                    MARPAT 143:326627  
GI



AB The invention relates to phenylalanine derivs. I [G = CO<sub>2</sub>H or tetrazolyl; L = a direct bond, NRc, O, NRcCO, CONRc, O<sub>2</sub>CNRc, NRcCO<sub>2</sub>, where Rc = H, alkyl; R<sub>1</sub>, R<sub>2</sub> = independently H, (un)substituted (cyclo)alkyl, alkenyl, alkynyl, heterocyclyl, (hetero)aryl, etc.; or NR<sub>1</sub>R<sub>2</sub> = (un)substituted heterocyclyl, heteroaryl; R<sub>3</sub>, R<sub>4</sub> = H, alkyl; R<sub>5</sub> = (un)substituted (hetero)aryl; R<sub>6</sub> = OH, alkoxy, NO<sub>2</sub>, halo, alkylsulfonyl, sulfamoyl, amino, acyl, carboxy, carbamoyl, CN, alkyl, alkenyl, alkynyl, etc.; n = 0-3] and their pharmaceutically-acceptable salts or esters which are  $\alpha$ <sub>4</sub> integrin antagonists. For example, reaction of Me (2S)-2-[[[(tert- butoxycarbonyl)amino]sulfonyl]amino]-3-[(2,6- dichlorobenzoyl)amino]phenyl]propionate (preparation given) with benzyl alc. in the presence of PBu<sub>3</sub> and ADPP in THF, followed by saponification with LiOH•H<sub>2</sub>O in THF gave (S)-II (43%). In  $\alpha$ <sub>4</sub> $\beta$ <sub>1</sub> adhesion assays, the latter inhibited U-937 cell adhesion to recombinant human soluble VCAM-1 with IC<sub>50</sub> values < 100 nM. Thus, I and compns. comprising them are useful for the treatment of inflammatory and immune disorders (no data).

L1 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:996111 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 141:410709

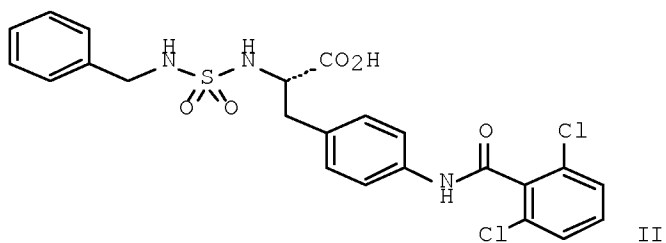
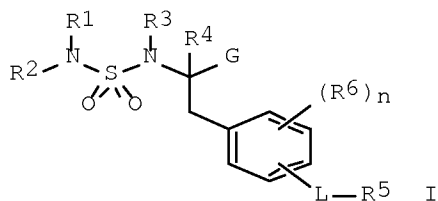
TITLE: Preparation of N-(2-phenylethyl)sulfamide derivatives as integrin  $\alpha$ <sub>4</sub> antagonists for treatment of inflammatory and immune disorders

INVENTOR(S): Jimenez Mayorga, Juan Miguel; Vidal Gispert, Laura; Warrellow, Graham

PATENT ASSIGNEE(S): Almirall Prodesfarma, S.A., Spain

SOURCE: PCT Int. Appl., 79 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE              | APPLICATION NO.  | DATE       |
|---|------|-------------------|------------------|------------|
| WO 2004099126   | A1   | 20041118          | WO 2004-EP4670   | 20040503   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW<br>RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG |      |                   |                  |            |
| ES 2219177  | A1   | 20041116          | ES 2003-1004     | 20030505   |
| ES 2219177  | B1   | 20060216          |                  |            |
| EP 1622867  | A1   | 20060208          | EP 2004-730833   | 20040503   |
| EP 1622867  | B1   | 20070919          |                  |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR   |      |                   |                  |            |
| CN 1816523  | A    | 20060809          | CN 2004-80019205 | 20040503   |
| JP 2006525271   | T    | 20061109          | JP 2006-505356   | 20040503   |
| US 2007179183   | A1   | 20070802          | US 2006-555286   | 20061017   |
| PRIORITY APPLN. INFO.:  |      |                   | ES 2003-1004     | A 20030505 |
|   |      |                   | WO 2004-EP4670   | W 20040503 |
| OTHER SOURCE(S):  |      | MARPAT 141:410709 |                  |            |
| GI  |      |                   |                  |            |



AB Title compds. L-phenylalanine derivs. I [wherein G = CO<sub>2</sub>H, tetrazolyl; L = direct bond, NRC, O, NRcCO, CONRc, OCONRc, NRcCO<sub>2</sub>; Rc = H, alkyl; R1, R2 = independently H, (un)substituted (cyclo)alkyl, alkenyl, alkynyl, heterocyclyl, (hetero)aryl, etc.; or NR1R2 = (un)substituted heterocyclyl, heteroaryl; R3, R4 = H, alkyl; R5 = (un)substituted (hetero)aryl; R6 = OH, alkoxy, NO<sub>2</sub>, halo, alkylsulfonyl, sulfamoyl, amino, acyl, carboxy, carbamoyl, CN, alkyl, alkenyl, alkynyl, etc.; n = 0-3; and pharmaceutically acceptable salts and esters thereof] were prepared as integrin  $\alpha$ 4 antagonists. For example, reaction of Me (2S)-2-[[[(tert-butoxycarbonyl)amino]sulfonyl]amino]-3-[4-[(2,6-dichlorobenzoyl)amino]phenyl]propionate (preparation given) with benzyl alc. in the presence of PBu<sub>3</sub> and ADPP in THF, followed by saponification with LiOH•H<sub>2</sub>O in THF gave (S)-II (43%). In  $\alpha$ 4 $\beta$ 1 adhesion assays, the latter inhibited U-937 cell adhesion to recombinant human soluble VCAM-1 with IC<sub>50</sub> values < 100 nM. Thus, I and compns. comprising them are useful for the treatment of inflammatory and immune disorders (no data).

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:331928 CAPLUS Full-text

DOCUMENT NUMBER: 140:357354

TITLE: A preparation of benzimidazolone derivatives useful as anti-inflammatory agents

INVENTOR(S): Dhar, T. G. Murali; Potin, Dominique; Maillet, Magali  
Jeannine Blandine; Launay, Michele; Nicolai, Eric  
Antoine; Iwanovicz, Edwin J.

PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA

SOURCE: PCT Int. Appl., 69 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|---------------|--|----------|-----------------|----------|
| -----         | ----   | -----    | -----           | -----    |
| WO 2004032861 | A2   | 20040422 | WO 2003-US31960 | 20031009 |
| WO 2004032861 | A3   | 20040805 |                 |          |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |          |                 |          |
| RW:           | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |
| AU 2003282510 | A1   | 20040504 | AU 2003-282510  | 20031009 |
| US 2004116467 | A1   | 20040617 | US 2003-681924  | 20031009 |
| US 6974815    | B2   | 20051213 |                 |          |

PRIORITY APPLN. INFO.: US 2002-417935P P 20021011  
WO 2003-US31960 W 20031009

OTHER SOURCE(S): MARPAT 140:357354

GI



AB The invention relates to benzimidazolone derivs. of formula I [wherein: K is O or S; Q is a bond or C(O), etc.; Ar is (un)substituted (hetero)aryl; J1 is a bond, -N(R4)-, etc.; J2 and J3 are -N(R4)- or (un)substituted CH2, etc.; Y and Z are independently selected from N, (un)substituted CH, etc.; R1 = H, (un)substituted alk(en)yl, (hetero)aryl, cycloalkyl, etc.; R2 and R3 are independently selected from H, halogen, NO2, CN, (un)substituted alk(en)yl, etc.; R4 is H, (un)substituted alk(en)yl, CN, C(O)-alkyl, O-alkyl, etc.], their enantiomers, diastereomers, and pharmaceutically- acceptable salts, useful as anti-inflammatory agents. Compds. I were tested in an H1-HeLa adhesion assay and in a HUVEC (human umbilical vein endothelial cells) adhesion assay (no biol. data). For instance, benzimidazole derivative II was prepared via intramol. heterocyclization of the obtained urea derivative III, and N-acetylation of the obtained benzimidazole derivative IV (no yield data).

L1 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:355600 CAPLUS Full-text

DOCUMENT NUMBER: 138:380469

TITLE: SUT-2 and SUT-3 genes, sulfate/anion exchanger polypeptides, and assays for inhibitors of lymphocyte adhesion

INVENTOR(S): Girard, Jean-Philippe; Vincourt, Jean-Baptiste; Amalric, Francois

PATENT ASSIGNEE(S): Fr.

SOURCE: U.S. Pat. Appl. Publ., 160 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| US 2003086872   | A1   | 20030508 | US 2002-222009  | 20020814   |
| WO 2003102029   | A1   | 20031211 | WO 2002-EP9135  | 20020814   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| AU 2002367997   | A1   | 20031219 | AU 2002-367997  | 20020814   |
| EP 1423426  | A1   | 20040602 | EP 2002-807483  | 20020814   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK   |      |          |                 |            |
| PRIORITY APPLN. INFO.:  |      |          | US 2001-312442P | P 20010815 |
|   |      |          | US 2001-323656P | P 20010919 |
|   |      |          | US 2001-333673P | P 20011126 |
|   |      |          | WO 2002-EP9135  | W 20020814 |

AB The present invention is directed to the SUT-2 and SUT-3 sulfate/anion exchanger polypeptides expressed in high endothelial venules endothelial cells (HEVECs). The invention also relates to drug screening assays for identifying compds. capable of inhibiting sulfate/anion transport and L-selectin mediated lymphocyte adhesion to high endothelial venules. Such compds. are drug candidates for treatment of inflammatory conditions and are claimed for

therapeutic uses. CDNAs for two isoforms of human gene SUT-3 protein were cloned from tonsil HEVEC RNA by RT-PCR based on yeast high-affinity sulfate transporter mRNA sequences. SUT-3 protein showed sulfate transporter function when the cDNA was expressed in Sf9 insect cells. A human SUT-3 gene was identified on chromosome 17 and a mouse ortholog on mouse chromosome 11. Human SUT-2 cDNAs were cloned based on sequence homol. with sulfate transporter DTD (diastrophic dysplasia) and SUT-2 genomic sequences were located on human chromosome 8. Functional assays in Xenopus oocytes showed that SUT-2 has activity as a sulfate transporter. Two SUT-2 cDNA isoforms were found to encode the same open reading frame, while another cDNA from kidney was found to encode a second protein isoform with slight modifications in the C-terminus.

L1 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:31445 CAPLUS Full-text

DOCUMENT NUMBER: 136:86057

TITLE: Preparation of aza-bridged-bicyclic amino acid

derivatives as  $\alpha$ 4 integrin antagonists

INVENTOR(S): Dyatkin, Alexey B.; Maryanoff, Bruce E.; Hoekstra, William J.; He, Wei; Kinney, William A.

PATENT ASSIGNEE(S): Ortho McNeil Pharmaceutical, Inc., USA

SOURCE: PCT Int. Appl., 99 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

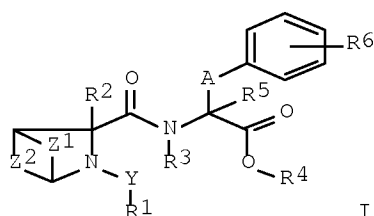
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE     | APPLICATION NO. | DATE       |
|------------------------|--|----------|-----------------|------------|
| WO 2002002556          | A2   | 20020110 | WO 2001-US20857 | 20010629   |
| WO 2002002556          | A3   | 20020718 |                 |            |
| W:                     | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW |          |                 |            |
| RW:                    | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG   |          |                 |            |
| US 2002091115          | A1   | 20020711 | US 2001-891602  | 20010626   |
| US 6960597             | B2   | 20051101 |                 |            |
| CA 2415088             | A1   | 20020110 | CA 2001-2415088 | 20010629   |
| EP 1303492             | A2   | 20030423 | EP 2001-952331  | 20010629   |
| R:                     | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |          |                 |            |
| BR 2001012359          | A  | 20030527 | BR 2001-12359   | 20010629   |
| HU 2003001195          | A2   | 20030828 | HU 2003-1195    | 20010629   |
| JP 2004506612          | T  | 20040304 | JP 2002-507808  | 20010629   |
| NZ 523852              | A  | 20041126 | NZ 2001-523852  | 20010629   |
| NO 2002006252          | A  | 20030226 | NO 2002-6252    | 20021227   |
| MX 2003PA00814         | A  | 20041101 | MX 2003-PA814   | 20030127   |
| ZA 2003000794          | A  | 20040429 | ZA 2003-794     | 20030129   |
| PRIORITY APPLN. INFO.: |  |          | US 2000-215695P | P 20000630 |
|                        |  |          | US 2001-891602  | A 20010626 |
|                        |  |          | WO 2001-US20857 | W 20010629 |

OTHER SOURCE(S): MARPAT 136:86057

GI



AB Aza-bridged-bicyclic amino acid derivs. I [Y = a bond, CO, CO<sub>2</sub>, CONH, SO<sub>2</sub>; R<sub>1</sub> = (un)substituted cycloalkyl, heterocyclyl, aryl, haloalkyl, alkyl, alkenyl, alkynyl, heteroaryl; R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> = H, (un)substituted alkyl, a bond when forming a monocyclic ring; R<sub>6</sub> = one to three substituents selected from halogen, alkoxy, (un)substituted cycloalkyl, heterocyclyl, aryl, haloalkyl heteroaryl, amino, arylsulfonyl, etc.; A = (un)substituted alkylene; Z<sub>1</sub> and Z<sub>2</sub> = (un)substituted alkylene or alkenylene] were prepared as  $\alpha_4\beta_1$  and  $\alpha_4\beta_7$  integrin receptor antagonists. Thus, condensation of benzenesulfonyl isocyanate with Et glyoxalate, followed by cycloaddn. with cyclohexadiene, hydrogenation, saponification, coupling with (S)-4-nitrophenylalanine Me ester, reduction of the nitro group, acylation with 2,6-dichlorobenzoyl chloride and ester saponification gave 4-[(2,6-dichlorobenzoyl)amino]-N-[[[(3S)-2- (phenylsulfonyl)-2-azabicyclo[2.2.2]oct-3-yl]carbonyl]-L-phenylalanine, which showed IC<sub>50</sub> = 21nM in Ramos cell adhesion assay.

L1 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:194157 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 130:232490

TITLE: Synthetic divalent sLex-containing polylactosamines and their preparation for blocking lymphocyte binding and treatment of inflammatory or other diseases

INVENTOR(S): Renkonen, Ossi; Renkonen, Risto

PATENT ASSIGNEE(S): Glycim Oy, Finland

SOURCE: PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 9912944  | A2   | 19990318 | WO 1998-FI688   | 19980904 |
| WO 9912944  | A3   | 19990826 |                 |          |
| W: AM, AT, AU, AZ, BA, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KG, KR, KZ, LT, LU, LV, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, TJ, TM, TR, UA, UZ, YU, MD |      |          |                 |          |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  |      |          |                 |          |
| CA 2302470  | A1   | 19990318 | CA 1998-2302470 | 19980904 |
| AU 9890739  | A    | 19990329 | AU 1998-90739   | 19980904 |
| EP 1015464  | A2   | 20000705 | EP 1998-942706  | 19980904 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |      |          |                 |          |

|                        |    |          |                |            |
|------------------------|----|----------|----------------|------------|
| US 6191271             | B1 | 20010220 | US 1998-148076 | 19980904   |
| HU 2000003418          | A2 | 20010228 | HU 2000-3418   | 19980904   |
| JP 2001515912          | T  | 20010925 | JP 2000-510750 | 19980904   |
| NO 2000001091          | A  | 20000302 | NO 2000-1091   | 20000302   |
| PRIORITY APPLN. INFO.: |    |          | US 1997-57660P | P 19970905 |
|                        |    |          | WO 1998-FI688  | W 19980904 |

AB The present invention is directed to novel compns. and their use in the treatment of inflammatory responses. Specifically, the invention is directed to novel synthetic oligosaccharide constructs and their use to block lymphocyte binding to correspondent oligosaccharides on the endothelial surface, and thus reduce or otherwise ameliorate an undesired inflammatory response. The invention is further directed to the use of such constructs in other disease states characterized by selectin binding, such as bacterial infections and metastatic cancers. The divalent sLexLex glycan (preparation given) was the most potent inhibitor of lymphocyte adhesion to high endothelial venules (HEV) in the L-selectin-dependent cell adhesion assay.

L1 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:581604 CAPLUS Full-text

DOCUMENT NUMBER: 125:245619

TITLE: Regulation of sialoadhesin expression on rat macrophages. Induction by glucocorticoids and enhancement by IFN- $\beta$ , IFN- $\gamma$ , IL-4, and lipopolysaccharide

AUTHOR(S): van den Berg, Timo K.; van Die, Irma; de Lavalette, Chantal Renardel; Doepp, Ed A.; Smit, Larissa D.; van der Meide, Peter H.; Tilders, Fred J. H.; Crocker, Paul R.; Dijkstra, Christine D.

CORPORATE SOURCE: Medical Fac., Vrije Univ., Amsterdam, Neth.

SOURCE: Journal of Immunology (1996), 157(7), 3130-3138  
CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER: American Association of Immunologists

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Sialoadhesin is a macrophage-restricted member of the Ig superfamily that mediates adhesion with lymphoid and myeloid cells. It is expressed on a subpopulation of macrophages in lymphoid tissues and in chronic inflammation (e.g., during autoimmune diseases). We have studied the regulation of sialoadhesin expression in vitro and show that glucocorticoids (GC) induce sialoadhesin expression on freshly isolated rat macrophages and the rat macrophage cell line R2. The cytokines IFN- $\beta$ , IFN- $\gamma$ , IL-4, and LPS, although unable to induce sialoadhesin expression by themselves, were able to enhance GC-mediated induction of sialoadhesin. Sialoadhesin expression was functional as shown by cell adhesion assays with human RBCs. Northern blotting expts. indicated that regulation predominantly occurred at the mRNA level. Comparison of the different combinations of GC and cytokines/LPS revealed differences in the level of GC-dependent enhancement of sialoadhesin expression, with IFN- $\beta$  and IL-4 being more potent than IFN- $\gamma$  and LPS. Moreover, the effects of IFN- $\gamma$  and LPS could be reproduced by priming, whereas IFN- $\beta$  and IL-4 were required simultaneously with GC. The regulation of sialoadhesin expression was mediated by the GC receptor, and not by mineralocorticoid receptor, as shown by inhibition expts. with specific antagonists. Finally, it is demonstrated that macrophages in the adrenal gland, the major site of endogenous GC production, express sialoadhesin. This study demonstrates that GC act as a primary inducer of sialoadhesin expression on rat macrophages, and that the response can be enhanced by IFN- $\beta$ , T cell-derived cytokines, or LPS.

L1 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:821507 CAPLUS Full-text

DOCUMENT NUMBER: 123:225873

TITLE: sLex is not responsible for the interaction of  
sLex-positive memory T lymphocytes with E-selectin

AUTHOR(S): Rotteveel, F. T. M.; Van Doornmalen, A. M.; Van Duin,  
M.

CORPORATE SOURCE: Dep. Immunology, NV Organon, Oss, Neth.

SOURCE: Immunology (1995), 86(1), 34-40

CODEN: IMMUAM; ISSN: 0019-2805

PUBLISHER: Blackwell

DOCUMENT TYPE: Journal

LANGUAGE: English

AB E-selectin is an adhesion mol. that is transiently and exclusively expressed on endothelial cells in response to inflammatory cytokines. In addition, E-selectin participates in the initial interaction of leukocytes with activated endothelial cells. This role of E-selectin in cell adhesion has made it a potential target for modulation of inflammatory processes that, for example, are occurring in autoimmune diseases such as rheumatoid arthritis. Although on granulocytes the ligand for E-selectin has been identified as the tetrasaccharide sialyl Lewis x (sLex), the mol. nature of this ligand on T lymphocytes has not yet been identified. In the present study, it was shown by fluorescence-activated cell sorter (FACS) anal. with the anti-sLex antibody CSLEX1 that T lymphocytes stimulated with phytohemagglutinin (PHA), interleukin-2 (IL-2), and transforming growth factor- $\beta$ 1 (TGF- $\beta$ 1) expressed sLex. Furthermore, in a cell adhesion assay these activated T cells of the memory phenotype bound specifically to E-selectin-transfected Chinese hamster ovary (E-CHO) cells. This adhesion was blocked with an anti-E-selectin antibody but not with CSLEX1. In the same assay, the interaction of sLex-pos. U937 cells with the E-CHO cells could be inhibited both with anti-E-selectin and CSLEX1 antibodies. Thus, sLex on activated T lymphocytes is not responsible for the interaction with E-selectin. Rather, these results suggest that stimulated T lymphocytes express an addnl. E-selectin ligand(s) with much higher avidity for E-selectin than sLex.

L1 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:331099 CAPLUS Full-text

DOCUMENT NUMBER: 122:96538

TITLE: Heparin-like oligosaccharides for selectin receptor  
modulating compositions

INVENTOR(S): Bevilacqua, Michael P.; Nelson, Richard M.; Linhardt,  
Robert J.

PATENT ASSIGNEE(S): Regents of the University of California, USA;

University of Iowa Research Foundation

SOURCE: PCT Int. Appl., 139 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE       |
|--|------|----------|-----------------|------------|
| -----  | ---- | -----    | -----           | -----      |
| WO 9426759   | A1   | 19941124 | WO 1994-US5327  | 19940513   |
| W: CA, JP  |      |          |                 |            |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE |      |          |                 |            |
| US 5527785   | A    | 19960618 | US 1993-89076   | 19930707   |
| PRIORITY APPLN. INFO.:   |      |          | US 1993-62957   | A 19930514 |

AB Selectin receptor binding (associated with e.g. inflammation, infection, malignancy, etc.) is modulated by a method which utilizes heparin-like oligosaccharides. Results of in vitro adhesion assays, as well as in vivo effects of heparin fragments, are presented.

L1 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:543489 CAPLUS Full-text

DOCUMENT NUMBER: 117:143489

TITLE: preparation of substituted urea and related compounds as cell adhesion modulators

INVENTOR(S): McKenzie, Thomas C.; Rishton, Gilbert M.

PATENT ASSIGNEE(S): Tanabe Seiyaku Co., Ltd., Japan

SOURCE: PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE              | APPLICATION NO. | DATE        |
|--|------|-------------------|-----------------|-------------|
| -----  | ---- | -----             | -----           | -----       |
| WO 9208464   | A1   | 19920529          | WO 1991-US8528  | 19911114    |
| W: CA, JP, US  |      |                   |                 |             |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE |      |                   |                 |             |
| PRIORITY APPLN. INFO.:                                 |      |                   | US 1990-613412  | A2 19901115 |
| OTHER SOURCE(S):                                       |      | MARPAT 117:143489 |                 |             |

AB Substituted urea, thiourea, and guanidino compds., and salts thereof, are useful as cell receptor antagonists for modulating cell adhesion via integrin and/or fibronectin receptors. These compds. are used for diagnosis, treatment, or prevention of cardiovascular and autoimmune diseases or conditions involving cell adhesion. Thus, 3,4-dichlorophenylguanidine was reacted with 3,5-dimethylpyrazolecarboxamide nitrate to obtain 1-(3,4-dichlorophenyl)biguanide nitrate (I). The IC<sub>50</sub> of I was 65µM in a U937 cell fibronectin adhesion assay.

=>

=> LOG Y

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL   |
|------------|---------|
| ENTRY      | SESSION |
| 112.22     | 112.43  |

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE | TOTAL   |
|------------|---------|
| ENTRY      | SESSION |
| -16.38     | -16.38  |

CA SUBSCRIBER PRICE

STN INTERNATIONAL LOGOFF AT 18:56:07 ON 13 NOV 2007